

REMARKS

Claims 1, 2 and 4 - 20 are pending in the present application, of which claims 15-20 have been withdrawn from consideration. By this Amendment, claim 1 has been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated October 20, 2004.

As to the Merits:

As to the merits of this case, the Examiner relies on the newly cited reference of Malladi (U.S. Patent No. 5,939,782) in setting forth the following rejections:

- 1) claims 1, 4-6, 8 and 9 are rejected under 35 USC 103(a) as being anticipated by Yamauchi et al. (U.S. Patent No. 6,503,778, of record);
- 2) claims 10, 13 and 14 are rejected under 35 USC 103(a) as being unpatentable over Yamauchi;
- 3) claim 2 is rejected under 35 USC 103(a) as being unpatentable over Yamauchi in view of Malladi;
- 4) claim 7 is rejected under 35 USC §103(a) as being unpatentable over Yamauchi et al. in view of Kabumoto et al. (U.S. Patent No. 5,883,428, of record); and

5) claims 11 and 12 are rejected under 35 USC §103(a) as being unpatentable over Yamauchi et al. in view of Cuchiaro et al. (U.S. Patent No. 5,888,585, of record).

Each of these rejections is respectfully traversed.

At the outset, it is noted that while claims 1, 4-6 and 8-9 are rejected under 35 U.S.C. §103(a) the Examiner uses the phrase “being anticipated” which is associated with a rejection under 35 U.S.C. §102. As such, it is respectfully requested that the Examiner clarify whether claims 1, 4-6 and 8-9 are rejected under §102 or §103(a).

Independent claim 1 has been amended to call for *a support substrate made of a semiconductor substrate having through holes filled with conductor in conformity with a first uniform pitch.*

It is respectfully submitted that this amendment to claim 1 does not necessitate a new search, since in rejected claims 4 and 5, it is clarified that “said support substrate is a Si substrate”. Accordingly, it is believed that the amendment to claim 1 should be entered.

In the Office Action, the Examiner takes the position that Yamaichi teaches “a support substrate (39, 11, Figs. 4A-4D, 9A and 9B) having through holes filled with conductor (19a, 19b

and 19c) in conformity with a first uniform pitch, capacitors (20 and 40, col. 18, lines 53-61) formed on the support substrate (39).”¹

However, the Examiner is clearly mis-characterizing the teachings of Yamauchi. That is, semiconductor substrate 11 does not have any through holes for connecting with a circuit board, and adhesive 39 is not a support substrate made of a semiconductor substrate, as now called for in claim 1. That is, according to Yamauchi, adhesive 39 is used for adherence of the device units 2 and 4, see Fig. 9B, and is made of epoxy resin and not of a semiconductor substrate.

As such, it is respectfully submitted that Yamauchi fails to disclose or fairly suggest the features of claim 1, as amended, concerning *a support substrate made of a semiconductor substrate having through holes filled with conductor in conformity with a first uniform pitch*.

In rejecting claims 4 and 5, the Examiner states that “the support substrate is a Si substrate (11) having through holes (col. 4, lines 1-11) with an insulation film (26 and 28) formed on the side walls of the holes”. This interpretation is never supported by Yamauchi. The support substrate 11 has no through holes. Insulation films 26 and 28 are formed above the principal surface of the semiconductor layer 13. There can be found no description of a support substrate made of a semiconductor substrate and having through holes with an insulation film formed on the side walls of the holes, the through holes being filled with conductor, as called for in each of claims 4 and 5.

¹ Please see, lines 19-21, page 2 of the Action.


Response under 37 C.F.R. §1.116
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If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'TEB', is written over the printed name of Thomas E. Brown.

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